REMARKS

Claims 1-4 are in the case and presented for consideration.

With regards to the drawings, Applicants hereby submit along with this Amendment replacement drawing sheets that incorporate the Examiner's suggestions. The Examiner's objection(s) to the drawings is therefore believed to be moot.

With regards to the specification, Applicants would like to thank the Examiner for the helpful suggestions relating to the arrangement of the specification. Since the guidelines specified in 37 CFR 1.77(b) are for guidance purposes, and are not mandatory in nature, Applicants respectfully decline Examiner's invitation to amend the specification at this time in order to avoid unnecessary file history estoppel.

Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, because, according to the Examiner, "an angle of the end surface is not clearly claimed." See page 3 of the January 31, 2006 Office Action.

To expedite the prosecution of this Application, but without conceding the correctness of the Examiner's rejection, Applicants have amended claim 1 to clarify the angle of the end surface with respect to the desired electrical length. See, e.g., claim 1. For example, it is possible increase the electrical length without increasing the diameter of the probe by arranging the end surface at an appropriate angle. See, e.g., page 7, lines 8-19, of the specification. Accordingly, claim 1, now presented, is believed to render the above ground of rejection moot.

Claims 1-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fig. 9 in view of U.S. Patent 6,922,579 to Taimisto, et al.

The Examiner stated that Fig. 9 discloses the measuring probe as recited in claim

1, except for "forming an end surface thereof obliquely to an axial direction of the internal electrode and an angle of the end surface with respect to the axial direction of the internal electrode... to obtain a desire electrical length." The Examiner further stated that "it would have been obvious... to incorporate the oblique form as taught by Taimisto, et al." in the probe as shown in Fig. 9 "for the purposes of making sufficient and substantial contact with a target (col. 10, lines 48-51)." See page 4 of the January 31, 2006 Office Action.

In response, Applicants respectfully traverse the Examiner's above ground of rejection. Applicants submit that there is no motivation or suggestion to combine the references to arrive at the claimed invention.

The related art cited by the Examiner, i.e., Fig. 9 (element 111), shows a probe having a ***core wire*** that serves as an internal conductor. See, e.g., Fig. 9 and page 2, lines 24-25, of the specification. The ***end surface of the probe lies on a plane perpendicular to the axial direction of the internal conductor***. See, e.g., page 3, lines 3-6, of the specification. To take measurements, the ***probe is positioned such that the axial direction of the internal conductor is perpendicular to the surface of the measured object***. See, e.g., page 3, lines 3-6, of the specification.

This type of measuring probe possesses several significant disadvantages. Namely, it is susceptible to temporal and positional deviation (see, e.g., page 5, lines 6-25, of the specification), and to inaccurate readings resulting from uneven or rough surfaces (see, e.g., page 4, lines 3-9, of the specification). Also, since the size of the end surface (or diameter of the probe) is directly related to probe sensitivity, reducing the diameter of the probe to increase the probe's ease of insertion into the measured object and to prevent unacceptable damage to the surface of the measured object will degrade the sensitivity of this probe (see, e.g., page 4, line 25 to page 5, line 5, of the specification).

Taimisto, et al. teach a catheter having ***concentric ring electrodes (22 & 24)*** (i.e., with an inner and outer ring). See, e.g., Taimisto, et al., Figs 6 and 9, and col. 4, lines 31-34. The thin profile of the ring electrode (22) ***contacts less tissue surface***, and therefore, allows measurement of electrical activity at a more focused tissue area. See, e.g., col. 5, line 65 to col. 6, line 4.

The surface of the catheter tip is ***positioned parallel to the surface of the targeted tissue*** to maximize contact of the ring electrodes (22 & 24) with the tissue. See, e.g., Taimisto, et al., col. 10, lines 1-5, and 24-29. For difficult to reach places, the contact surface of the catheter is formed at an angle – solely to allow substantial and parallel contact ***between the contact surface and the surface of the targeted tissue***. See, e.g., Taimisto, et al., col. 10, lines 59-64. Furthermore, the catheter ***cannot penetrate any barrier*** and its only application is for measuring surface characteristics. See, e.g., Taimisto, et al., col. 9, lines 26-29 (stating that "[w]hen using the catheter 10 to diagnose or treat a heart, the ***physician first establishes access*** to a selected vein or artery.").

To establish a *prima facie* case of obviousness, the initial burden is on the Examiner to show that there is suggestion or motivation in the reference for modifying or combining the teachings of the reference. See, e.g., MPEP § 2142. It is inappropriate to use applicant's disclosure as a blueprint (or to use hindsight based on knowledge obtained from application's patent disclosure) to reconstruct the claimed invention from selected pieces of prior art absent some suggestion, teaching, or motivation in the prior art to do so. See, e.g., Uniroyal, Inc. v. Rudkin-Wiley Corp. , 837 F.2d 1044, 1051-52, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988); In re Warner, 379 F.2d 1011,1017, 154 USPQ 173, 177 (CCPA 1967), cert. denied, 389 U.S. 1057(1968); In re Rouffet, 149 F.3d 1350, 1357 (Fed. Cir. 1998) ("In other words, the examiner must show reasons that the skilled artisan, confronted

with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.").

The Examiner, however, has not met the burden of showing that there is motivation or suggestion to combine the cited references. For instance, both references fail to recognize that forming the end surface of the measuring probe obliquely with respect to the axial direction of the internal conductor has the effect of increasing the cross-sectional area of the end surface. This configuration allows the diameter of the measuring probe to be reduced while maintaining the desired electrical length. With the oblique tip and the reduced diameter of the probe, damage to the measured object is minimized or avoided during probe insertion. See, e.g., page 7, lines 7-19, of the specification.

In contrast, Taimisto, et al., teach that "sufficient and substantial contact" is formed by ***arranging the contact surface parallel to the outer surface of the target***. See, e.g., page 4, last paragraph of January 31, 2006 Office Action; Taimisto, et al., col. 10, lines 21-29. Where parallel contact with the targeted surface cannot be made, such as due to the limited flexibility of the probe or to the geometry and/or orientation of the surface of the targeted object, Taimisto, et al. teach arranging the catheter tip at an angle to obtain ***parallel surface*** contact. See, e.g., Taimisto, et al., col. 10, lines 55-65.

There is nothing in the cited references that teach a measuring probe configured to measure the internal complex dielectric constant of an object while avoiding or minimizing the damage around the insertion zone.

The cited references, even if combinable, do not teach or disclose every feature recited in claim 1, such as, for example, a measuring probe that is sufficiently slender to be inserted into a measured object and is still able to provide an accurate reading of the

object's internal characteristics. A claim is obvious only if the applied references teach or disclose every feature recited in the claim. However, the cited references fail to teach, disclose or suggest a measuring probe that does not require the contact surface (or end surface) to be ***parallel to the outer surface*** of the measured object in order to measure its complex dielectric constant. The cited references also fail to teach, disclose or suggest a measuring probe having an end surface that is dimensioned and configured to facilitate insertion of the probe into a measured object without affecting the probe's electrical length (or sensitivity). See, e.g., page 7, lines 8-19, of the specification. Damage to the measured object is avoided by reducing the diameter of the measuring probe, and the sensitivity of the probe can be fine tuned by adjusting the angle of the end surface (with respect to the axial direction of the inner conductor). See, e.g., page 7, lines 13-19, of the specification. It is respectfully submitted that these as well as other patentable features, elements and arrangements recited in the presently pending claims are not disclosed or taught by the applied references. Accordingly, reconsideration and withdrawal of this ground of rejection is respectfully requested.

With regards to claims 2-4, these claims recite subject matters similar to that recited in claim 1, and were rejected for the same reasons used to reject claim 1. For the remarks made in response to the rejection of claim 1, which are also applicable and reasserted, as if in full, herein, in response to the rejection of claims 2-4, it is believed that the reasons for rejecting these claims have been overcome.

Accordingly, the application and claims are believed to be in condition for allowance, and favorable action is respectfully requested. No new matter has been added.

If any issues remain, the Examiner is respectfully invited to contact the undersigned at the number below to advance the application to allowance.

Respectfully submitted,

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Fig. 1

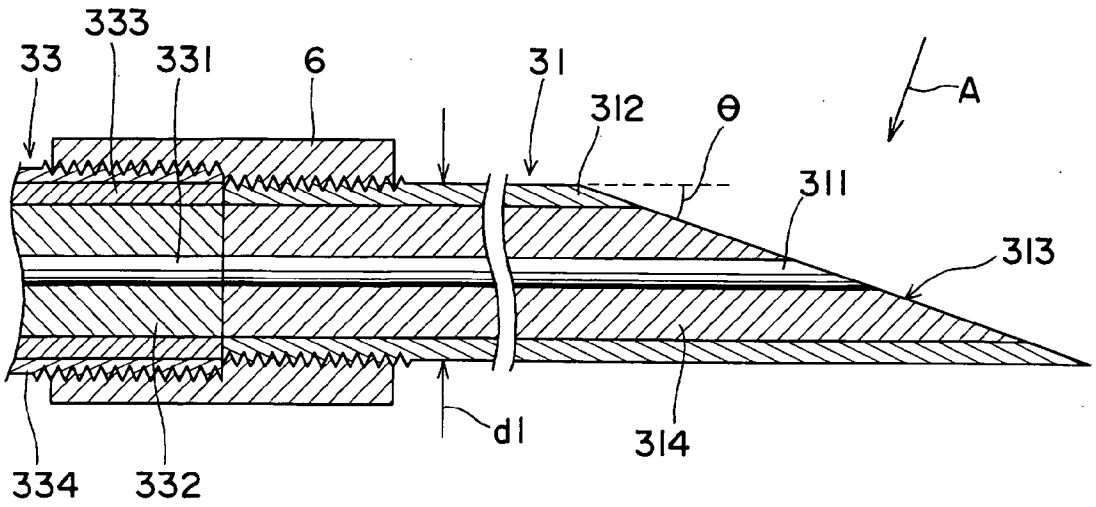
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Fig. 2

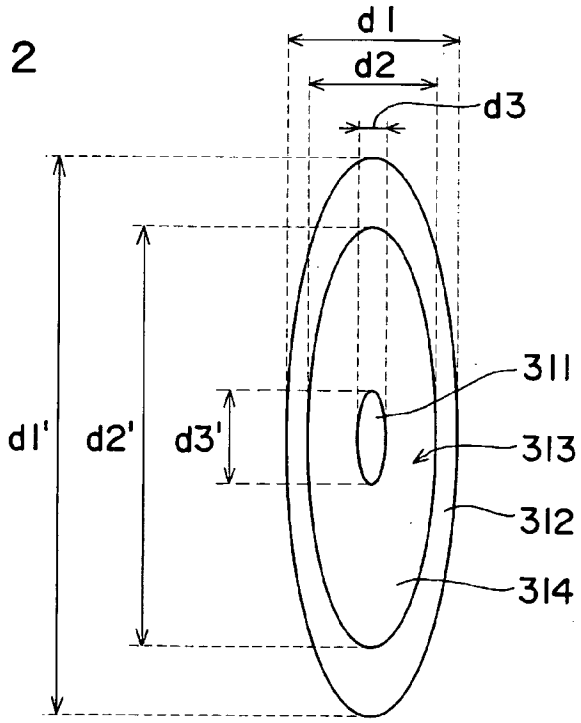
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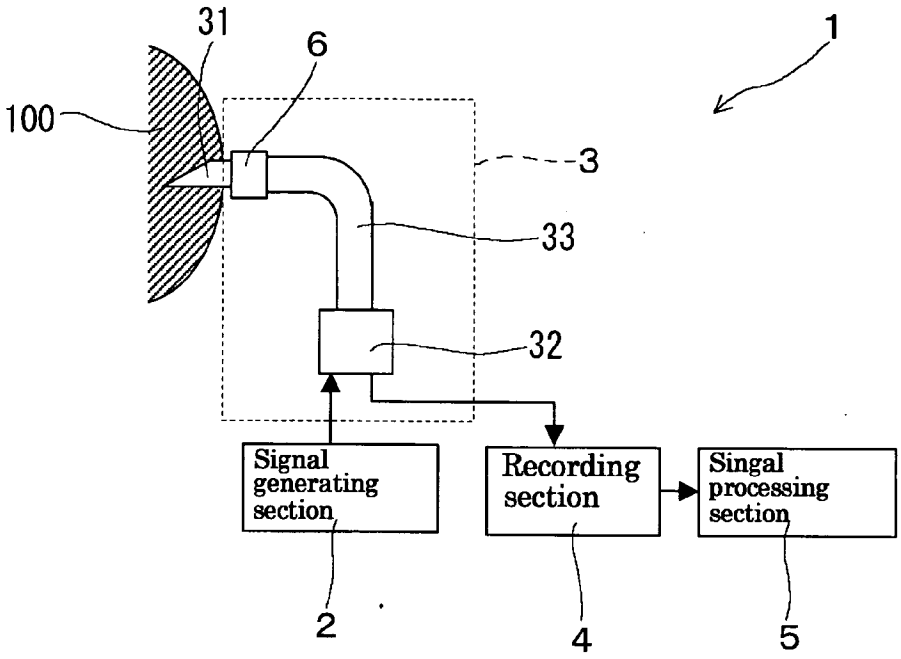
Fig. 3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Recording section
Singal processing section
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4
5

Fig. 4

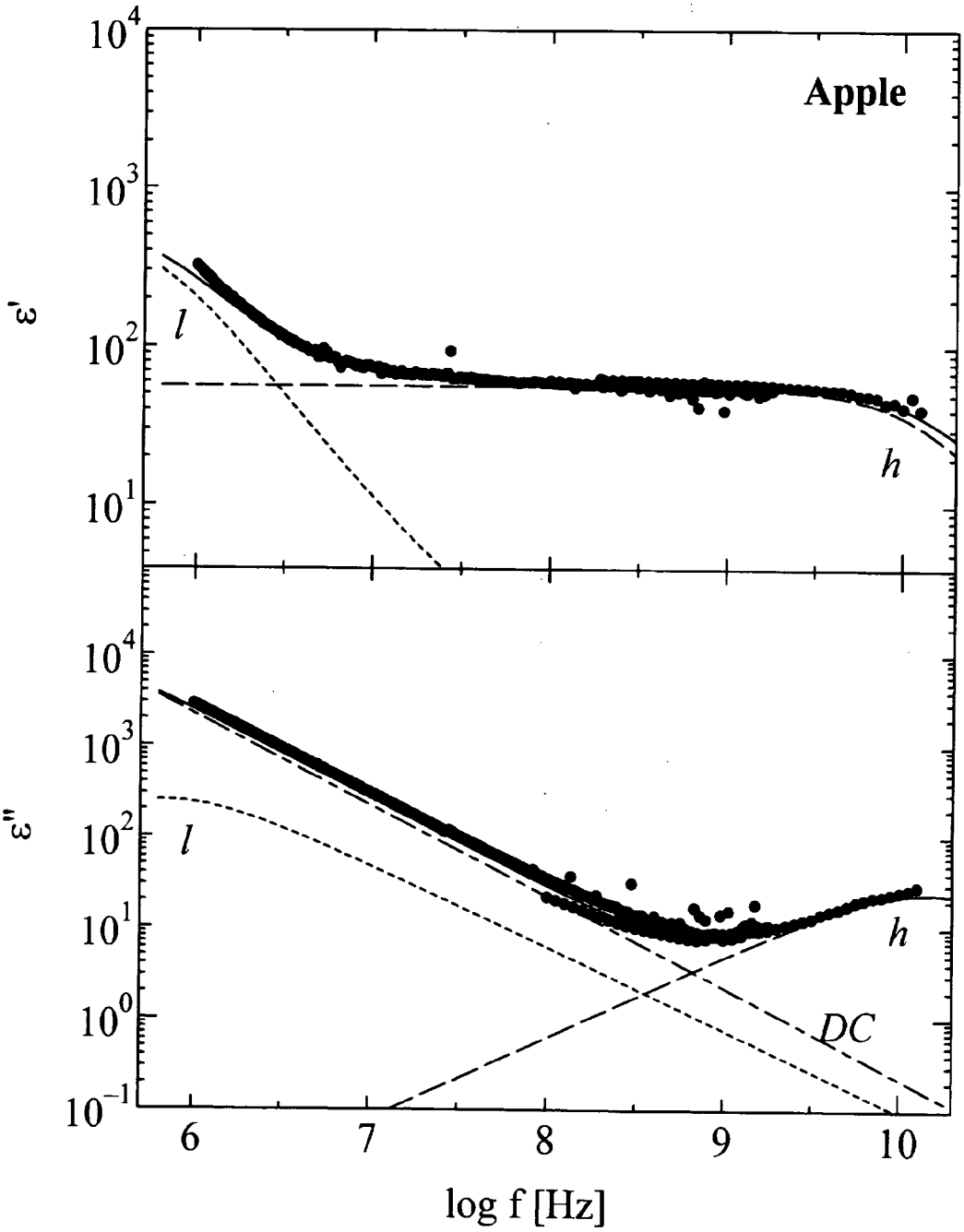

Fig. 5

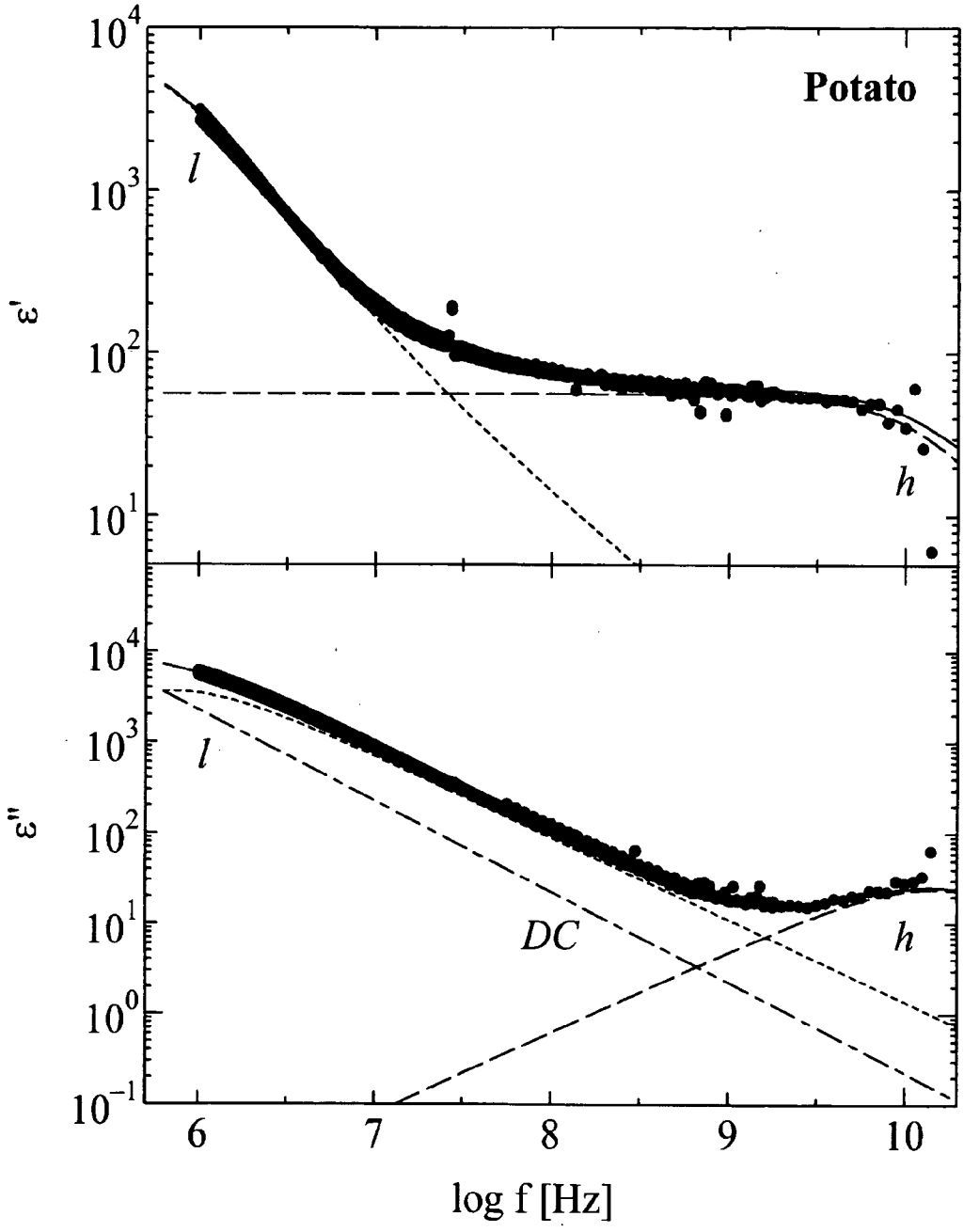

Fig. 6

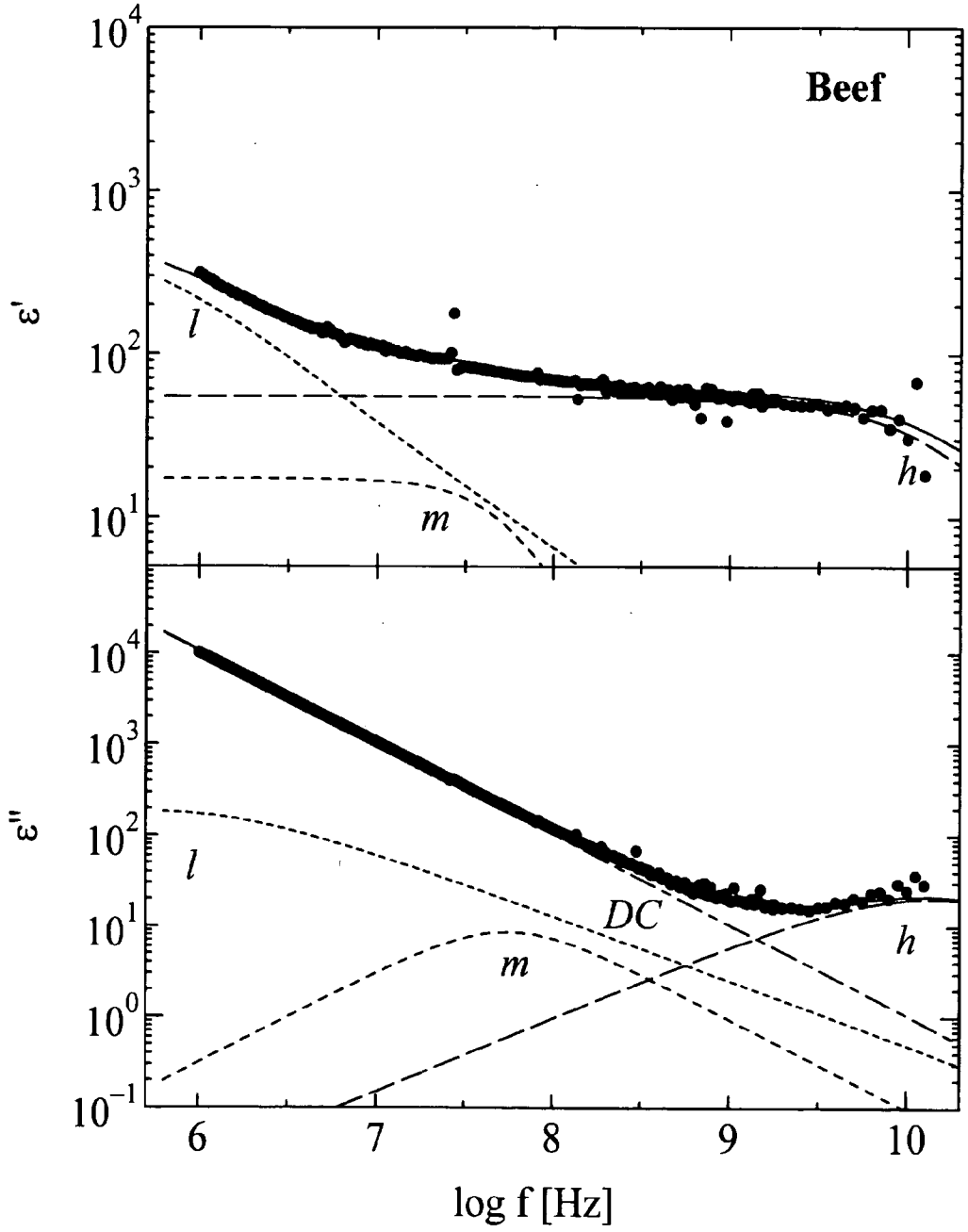

Fig. 7

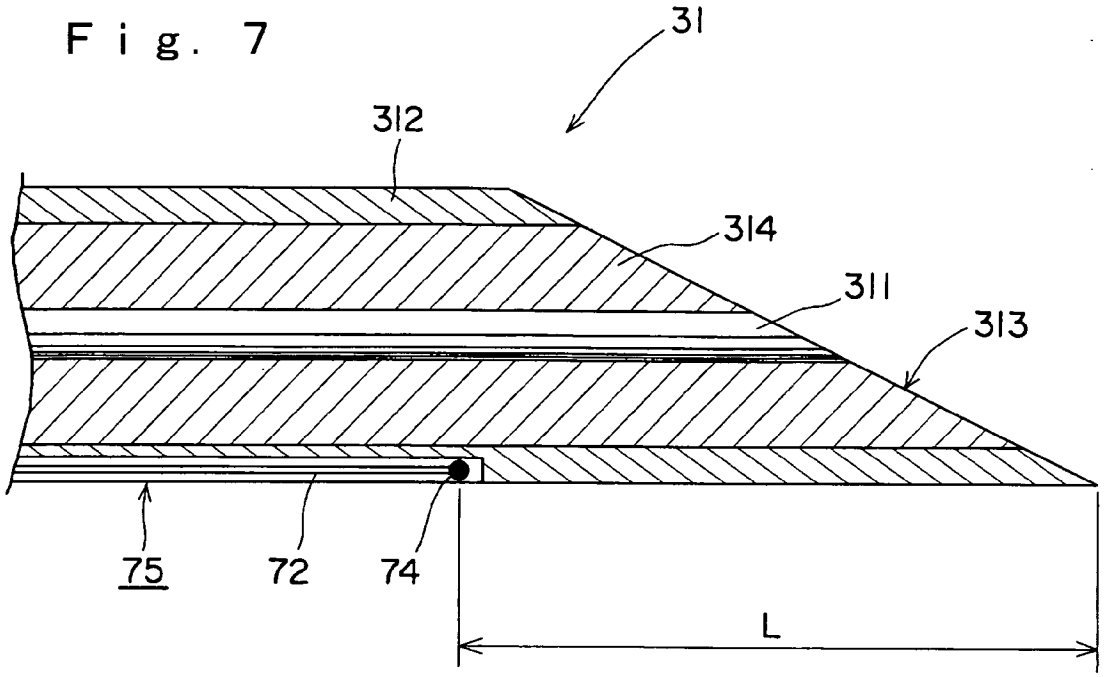

Fig. 8 (Prior Art)

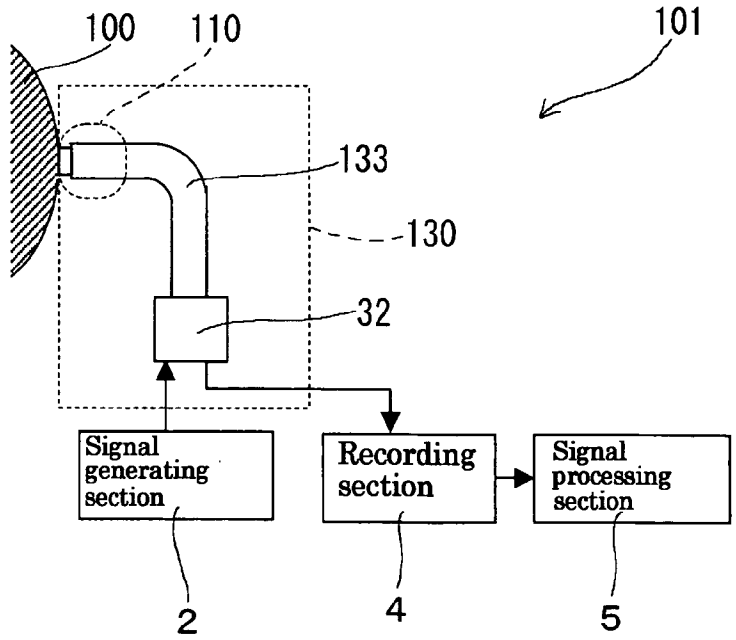

Fig. 9 (Prior Art)

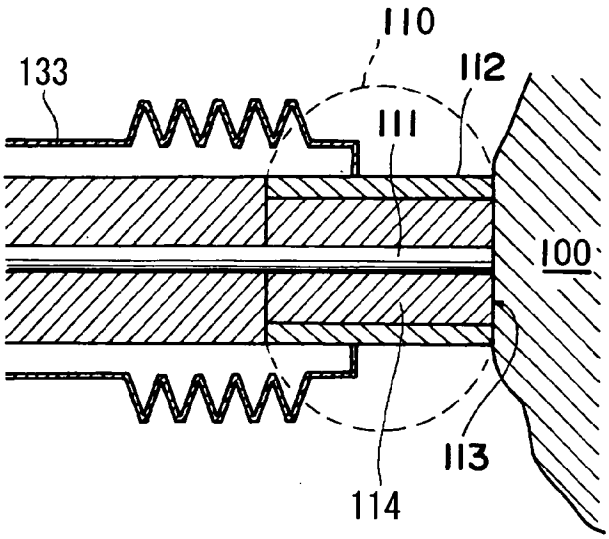

Fig. 10 (Prior Art)